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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Wittich Kaule

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ROTHWELL, FIGG, ERNST & MANBECK, P.C.

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WASHINGTON, DC 20005

EXAMINER

LAVARIAS, ARNEL C

ART UNIT

PAPER NUMBER

2872

NOTIFICATION DATE

DELIVERY MODE

11/10/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/517,491	<b>Applicant(s)</b> KAULE, WITTICH	
	<b>Examiner</b> Arnel C. Lavarias	<b>Art Unit</b> 2872	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10/27/09, 8/17/05, 12/10/04.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 and 32-37 is/are pending in the application.
- 4a) Of the above claim(s) 3-5, 9-29 and 32-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 6-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/17/05, 12/10/04</u> .                                       | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of Group ID (Claims 6-8) in the reply filed on 10/27/09 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 3-5, 9-29, 32-37 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10/27/09.

### ***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

4. The originally filed drawings were received on 12/10/04. These drawings are objected to for the following reason(s) as set forth below.
5. The drawings are objected to because of the following informalities:  
Figure 3- text is not in English.  
Figure 8- text is not in English.

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Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

6. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

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The language should be clear and concise and should not repeat information given in the title. *It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.*

7. The abstract of the disclosure is objected to because of the following informalities:

Abstract, lines 1-2- change 'it is disclosed to fill a contour line' to 'a contour line is filled'.

Correction is required. See MPEP § 608.01(b).

8. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Examples of such errors are set forth below.

9. The disclosure is objected to because of the following informalities:

Paragraph 0018, line 3- 'I.e.,' should read 'For example,'

Paragraph 0027, line 9- 'line Alternatively' should read 'line. Alternatively'

Paragraph 0074, line 4- 'therebelow. I.e.,' should read 'therebelow, i.e.,'.

Appropriate correction is required.

### ***Claim Objections***

10. Claims 1-2, 6-8 are objected to because of the following informalities:

Claim 1, line 2 'seperately' should read 'separately'

Claim 1 recites the limitation "the grating field" in line 4. There is insufficient antecedent basis for this limitation in the claim. This limitation has been interpreted to mean 'the at least one grating field'.

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Claim 1, lines 5, 8, and Claim 2, line 2 recite the limitation "the grating pattern". There is insufficient antecedent basis for this limitation in the claim. The first instance of this limitation in Claim 1, line 5 has been interpreted to mean 'a grating pattern'.

Claim 1 recites the limitation "the help" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the coordinates of a starting point" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the respective coordinates of a starting point" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the coordinates of an end point" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the respective coordinates of an end point" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.

Claims 2, 6-8 are dependent on Claim 1, and hence inherit the deficiencies of Claim 1. Similarly, Claim 8 is dependent on Claim 7, and hence inherits the deficiencies of Claim 7.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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12. Claims 1-2, 6-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitations “defining a contour line of the grating field, filling the contour line with the grating pattern”. However, it is not clear how a line may be filled with a grating pattern, since a line has no interior area. In reviewing the specification and figures of the instant application, it appears that the contour line itself is not filled. See for example Figure 4 of the instant application, wherein a contour line is used to delineate a closed interior spatial area. It is this closed interior spatial area delineated by the contour line that is filled with the grating pattern, as shown in Figure 6 of the instant application. Claims 2, 6-8 are dependent on Claim 1, and hence inherit the deficiencies of Claim 1.

13. Claims 7-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites the limitations of “the coordinates of a starting point of *a grating line*” and “the coordinates of an end point of *a grating line*” (Emphasis added). It is not clear from these limitations if these grating lines refer to the grating lines previously introduced in Claim 2, or if these lines are separate and unique grating lines not previously recited. Further, Claim 2 recites “grating lines” in the plural, without distinguishing any particular individual grating line. However, Claim 7 refers only to a

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single grating line. It is not clear which single line of the plurality is being referred to here. Claim 8 is dependent on Claim 7, and hence inherits the deficiencies of Claim 7.

14. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites the limitation of “the starting points and end points of grating lines located side by side are connected”. This limitation is unclear and confusing. It is not clear whether the starting points and the end points refer back to the start and end points recited in Claim 7, or if they refer to separate and unique start and end points not previously recited. Further, it is not clear how the connection between points is to be made. Is the start point of one line to be connected to the end point of another adjacent line? Or, is the start point of one line to be connected to the start point of another adjacent line? Finally, in reviewing Figures 8 and 10, the ‘connection’ between start/end points does not appear to be any type of actual physical connection. Also, Figures 11-12 lack any start or end points to be ‘connected’. Thus, it is not clear what type of ‘connection’ is needed or implied by the above limitation.

### ***Claim Rejections - 35 USC § 102***

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.



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16. Claims 1-2, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Modegi (U.S. Patent No. 5784200).

Modegi discloses a method (See for example Abstract; Figures 43-60) for producing a grating image of a security element, which at least has one grating field separately perceptible with the naked eye (See for example 'P: Picture Pattern' in Figure 43; Figures 44-45), said method comprising the following steps of defining a contour line of the at least one grating field (See for example 51, 'C: Contour Line Data' in Figure 43; Figure 44); filling the contour line with a grating pattern, the grating pattern within the contour line being described by grating coordinates (See for example 52, 53, 'Q: Grating Condition Data' in Figure 43; Figure 45-46; col. 36, line 22-col. 38, line 27); supplying the grating coordinates to a writing apparatus (See for example 54 in Figure 43; col. 32, line 31-col. 33, line 10); and producing the grating pattern in a substrate with the writing apparatus and with help of the grating coordinates (See for example 54, 'H: Diffraction Grating Original Block' in Figure 43; col. 32, line 31-col. 33, line 23). Modegi additionally discloses the grating pattern is formed by grating lines which are disposed side by side (See for example 'L: Grating Pattern', 'H: Diffraction Grating Original Block' in Figure 43; Figures 45, 47-49, 52-60).

### ***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claim 6, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Modegi in view of Inanami et al. (U.S. Patent Application Publication US 2003/0160192 A1).

Modegi discloses the invention as set forth above in Claims 1-2, except for the grating coordinates of the grating lines being sequentially sorted according to their spatial disposition. However, Inanami et al. teaches a conventional charged particle beam method for exposing a mask for creating or transferring a pattern to a workpiece (See for example Abstract; Figures 3, 9, 22). In particular, Inanami et al. teaches that the data associated with the pattern to be created or transferred onto the workpiece is sequentially sorted according to their spatial disposition (See for example Figures 11-13; Paragraphs 0170-0178). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the grating coordinates of the grating lines be sequentially sorted according to their spatial disposition, as taught by Inanami et al., in the method of Modegi, for the purpose of significantly reducing the waiting time required to stabilize the deflectors in the electron beam device, thus reducing the time needed to create or transfer the pattern onto the workpiece.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

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***Conclusion***

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 571-272-2315. The examiner can normally be reached on M-F 10:00 AM - 6:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on 571-272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Arnel C. Lavarias  
Primary Examiner  
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11/3/09

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